

Db 61 vcapcpdhyytdswhtsdeclycspvckelgyvkgecnrtlnrryceckegryljetefclx 120
 |||
 Qy 61 VCAPCPDHYTDSWHTSDECLYCSPVCKELQYVKGECNRTNRRYCECKEGRYLJETEFCLX 120
 Db 121 hrscppgfgvvaqgtpentvckrcpddffsnetsakpcrkhnctnsvfgllltqkgnat 180
 |||
 Qy 121 HRSCPFGVVAQGTPEENTVCKRCPPDFFSNETSKAPCRKHNTCSYVGLLLTQKGNAT 180
 Db 181 hdnicsgnsesetqkcgldvtlceaeaffrayptkftpnwlsylvdnlpgrtkvnaesveri 240
 |||
 Qy 181 HDNICSGNSESTOKCGIDVTLCEAEFFRAYPTKFTPNWLSYLVNLPGRTKVNAESVERI 240
 Db 241 krqhsagcetfqlklkwhqmkdqvkkldidlcensvgrhnyghantlfeqlrsime 300
 |||
 Qy 241 KROHSSQEQTFQLKLMKHQNKDQIVKRIQDIDLCENSVGRHNYGHANLTFEQLRSIME 300
 Db 301 slpgkkygaedtektikackpsdqllklslwrknngdgtlkglmhalksktyhfpkt 360
 |||
 Qy 301 SLPGKKYGAEDIEKTIKACKPSDQILKLSLWRKNGDGTLLKGLMHALKSKTYHFPKT 360
 Db 361 vtqslkktlrlfhsftmyklygklflemignvqsvxisc1 401
 |||
 Qy 361 VTQSLKKTIRFLHSFTMYKLYOKLFLEMIGNVOVSXISCL 401

RESULT 2
 ID R99932 standard; Protein: 401 AA.

AC R99932;
 DT 22-APR-1997 (first entry)
 DE Mutated OCIF, OCIF-C20S.
 KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
 OS Osteoporosis.
 FH Key Location/Qualifiers
 FT Peptide 1..21
 FT /note= "Signal peptide" protein 22..401
 FT /note= "Mature OCIF-C20S"
 FT MISC_difference 202
 FT /label= C20S
 FN WO9626217-A1.
 PD 29-AUG-1996.
 PE 20-FEB-1996; J00374.
 PR 20-FEB-1995; JP-054977.
 PR 21-JUL-1995; JP-207508.
 PA (SNOW) SNOW BRAND MILK PROD CO LTD.
 PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
 PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
 PI WPI: 96-402320/40.
 DR N-PSDB: T33162.
 DT DNA encoding osteoclastogenesis inhibitory factor protein - useful
 PT for bone resorption control, esp. treatment of osteoporosis
 PS Claim 32; Page 96-98; 183pp; Japanese.
 CC This sequence represents a mutated version of the full length
 CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
 CC sequence represents OCIF-C20S in which the 20th Cys residue in the
 CC mature OCIF protein is substituted by Ser. The OCIF of the invention
 CC has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
 CC and 120 kD under non-reducing conditions. The protein is adsorbed onto
 CC cation-exchangers or heparin and its activity is lowered after 10 mins
 CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
 CC deg.C. OCIF is useful in the control of bone resorption and therefore
 CC in the treatment and prevention of disorders of bone resorption, e.g.
 CC osteoporosis.
 SQ Sequence 401 AA;

Query Match 99.3%; Score 3010; DB 20; Length 401;
 Best Local Similarity 99.5%; Pred. No. 6.52e-294;
 Matches 399; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 1 mmllccalvfldisikwtetgtpkyllhydeetsnqllcdckppgtyllkqhctakwt 60
 |||

Qy 1 MNLLCCALVFELDISIKWTOETFPFKYLLHYDEETSHQLCDCKCPGTYLKQHC TAKWT 60
 Db 61 vcapcpdhyytdswhtsdeclycspvckelgyvkgecnrtlnrryceckegryljetefclx 120
 |||
 Qy 61 VCAPCPDHYTDSWHTSDECLYCSPVCKELQYVKGECNRTNRRYCECKEGRYLJETEFCLX 120
 Db 121 hrscppgfgvvaqgtpentvckrcpddffsnetsakpcrkhnctnsvfgllltqkgnat 180
 |||
 Qy 121 HRSCPFGVVAQGTPEENTVCKRCPPDFFSNETSKAPCRKHNTCSYVGLLLTQKGNAT 180
 Db 181 hdnicsgnsesetqkcgldvtlceaeaffrayptkftpnwlsylvdnlpgrtkvnaesveri 240
 |||
 Qy 181 HDNICSGNSESTOKCGIDVTLCEAEFFRAYPTKFTPNWLSYLVNLPGRTKVNAESVERI 240
 Db 241 krqhsagcetfqlklkwhqmkdqvkkldidlcensvgrhnyghantlfeqlrsime 300
 |||
 Qy 241 KROHSSQEQTFQLKLMKHQNKDQIVKRIQDIDLCENSVGRHNYGHANLTFEQLRSIME 300
 Db 301 slpgkkygaedtektikackpsdqllklslwrknngdgtlkglmhalksktyhfpkt 360
 |||
 Qy 301 SLPGKKYGAEDIEKTIKACKPSDQILKLSLWRKNGDGTLLKGLMHALKSKTYHFPKT 360
 Db 361 vtqslkktlrlfhsftmyklygklflemignvqsvxisc1 401
 |||
 Qy 361 VTQSLKKTIRFLHSFTMYKLYOKLFLEMIGNVOVSXISCL 401

RESULT 3
 ID R99931 standard; Protein: 401 AA.

AC R99931;
 DT 22-APR-1997 (first entry)
 DE Mutated OCIF, OCIF-C19S.
 KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
 OS Osteoporosis.
 FH Key Location/Qualifiers
 FT Peptide 1..21
 FT /note= "Signal peptide" protein 22..401
 FT /note= "Mature OCIF-C19S"
 FT MISC_difference 195
 FT /label= C19S
 FN WO9626217-A1.
 PD 29-AUG-1996.
 PE 20-FEB-1996; J00374.
 PR 20-FEB-1995; JP-054977.
 PR 21-JUL-1995; JP-207508.
 PA (SNOW) SNOW BRAND MILK PROD CO LTD.
 PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
 PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
 PI WPI: 96-402320/40.
 DR N-PSDB: T33161.
 DT DNA encoding osteoclastogenesis inhibitory factor protein - useful
 PT for bone resorption control, esp. treatment of osteoporosis
 PS Claim 29; Page 94-96; 183pp; Japanese.
 CC This sequence represents a mutated version of the full length
 CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
 CC sequence represents OCIF-C19S in which the 19th Cys residue in the
 CC mature OCIF protein is substituted by Ser. The OCIF of the invention
 CC has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
 CC and 120 kD under non-reducing conditions. The protein is adsorbed onto
 CC cation-exchangers or heparin and its activity is lowered after 10 mins
 CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
 CC deg.C. OCIF is useful in the control of bone resorption and therefore
 CC in the treatment and prevention of disorders of bone resorption, e.g.
 CC osteoporosis.
 SQ Sequence 401 AA;

Query Match 99.3%; Score 3010; DB 20; Length 401;
 Best Local Similarity 99.5%; Pred. No. 6.52e-294;
 Matches 399; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 1 mmllccalvfldisikwtetgtpkyllhydeetsnqllcdckppgtyllkqhctakwt 60
 |||

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OY 1 MNKLCCALVFDIDISIKWTQETFPKKYHDEETSHQLLCDKCPGGTYLKQCHTAKMKT 60
DB 61 VCAPCPDHYTDSWHTSDCLYCSPVCKELQYVKGECDRTNVRCECKEGRYLEIEFCLK 120
OY 61 VCAPCPDHYTDSWHTSDCLYCSPVCKELQYVKGECDRTNVRCECKEGRYLEIEFCLK 120
OY 121 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
DB 121 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
OY 121 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
DB 181 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
OY 181 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
DB 181 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
OY 241 KRQHSQEQTFGLKLMKQNKDQDIVKRIQDIDCENSVRHIGHANLFEQLSLME 300
DB 241 KRQHSQEQTFGLKLMKQNKDQDIVKRIQDIDCENSVRHIGHANLFEQLSLME 300
OY 241 KRQHSQEQTFGLKLMKQNKDQDIVKRIQDIDCENSVRHIGHANLFEQLSLME 300
DB 301 SJPGKKVGADEIEKTIKACKPSDQILKLSLWRKNGDQDITLGLMHALKHSTYHFPKT 360
OY 301 SJPGKKVGADEIEKTIKACKPSDQILKLSLWRKNGDQDITLGLMHALKHSTYHFPKT 360
DB 361 VCSLKKTIIRFLHFTMYKLYGKLFLEMIGNQVGVKISCL 401
OY 361 VCSLKKTIIRFLHFTMYKLYGKLFLEMIGNQVGVKISCL 401

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RESULT 4
ID R99933 standard; Protein: 401 AA.

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AC R99933;
DT 22-APR-1997 (first entry)
DE Mutated OCIF, OCIF-C21S.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
  osteoporosis.
OS Synthetic.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..401
FT /note= "Mature OCIF-C21S"
FT MISC-difference 277
FT /label= C21S
PN WO9626217-A1.
PD 29-AUG-1996.
PE 20-FEB-1996; JP-054977.
PR 20-FEB-1995; JP-054977.
PI 21-JUL-1995; JP-207508.
PI (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI WPI: 96-402320/40.
PI N-PSDB: T33163.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
  for bone resorption control, esp. treatment of osteoporosis
PS Claim 35, Page 98-100; 183pp; Japanese.
SC This sequence represents a mutated version of the full length
  osteoclastogenesis inhibitory factor (OCIF) of the invention. This
  sequence represents OCIF-C21S in which the 21st Cys residue in the
  mature OCIF protein is substituted by Ser. The OCIF of the invention
  has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
  and 120 kD under non-reducing conditions. The protein is adsorbed onto
  cation-exchangers or heparin and its activity is lowered after 10 mins
  at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
  deg.C. OCIF is useful in the control of bone resorption and therefore
  in the treatment and prevention of disorders of bone resorption, e.g.
  osteoporosis.
SQ Sequence 401 AA;

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Query Match 99.2%; Score 3006; DB 20; Length 401;
Best Local Similarity 99.0%; Pred. No. 1.69e-293;
Matches 397; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

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DB 1 MNKLCCALVFDIDISIKWTQETFPKKYHDEETSHQLLCDKCPGGTYLKQCHTAKMKT 60
OY 1 MNKLCCALVFDIDISIKWTQETFPKKYHDEETSHQLLCDKCPGGTYLKQCHTAKMKT 60
DB 61 VCAPCPDHYTDSWHTSDCLYCSPVCKELQYVKGECDRTNVRCECKEGRYLEIEFCLK 120
OY 61 VCAPCPDHYTDSWHTSDCLYCSPVCKELQYVKGECDRTNVRCECKEGRYLEIEFCLK 120
OY 121 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
DB 121 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
OY 121 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
DB 181 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
OY 181 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
DB 181 HSCPPGFVAVAGIPERNVTCKRCDDGFNSNETSKAPCRKHTNCSVGLLLTQGNAT 180
OY 241 KRQHSQEQTFGLKLMKQNKDQDIVKRIQDIDCENSVRHIGHANLFEQLSLME 300
DB 241 KRQHSQEQTFGLKLMKQNKDQDIVKRIQDIDCENSVRHIGHANLFEQLSLME 300
OY 241 KRQHSQEQTFGLKLMKQNKDQDIVKRIQDIDCENSVRHIGHANLFEQLSLME 300
DB 301 SJPGKKVGADEIEKTIKACKPSDQILKLSLWRKNGDQDITLGLMHALKHSTYHFPKT 360
OY 301 SJPGKKVGADEIEKTIKACKPSDQILKLSLWRKNGDQDITLGLMHALKHSTYHFPKT 360
DB 361 VCSLKKTIIRFLHFTMYKLYGKLFLEMIGNQVGVKISCL 401
OY 361 VCSLKKTIIRFLHFTMYKLYGKLFLEMIGNQVGVKISCL 401

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RESULT 5
ID R99942 standard; Protein: 399 AA.

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AC R99942;
DT 23-APR-1997 (first entry)
DE Mutated OCIF, OCIF-CL.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
  osteoporosis.
OS Synthetic.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..399
FT /note= "Mature OCIF-CL"
PN WO9626217-A1.
PD 29-AUG-1996.
PE 20-FEB-1996; JP-054977.
PR 20-FEB-1995; JP-054977.
PI 21-JUL-1995; JP-207508.
PI (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI WPI: 96-402320/40.
PI N-PSDB: T33172.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
  for bone resorption control, esp. treatment of osteoporosis
PS Claim 62; Page 117-119; 183pp; Japanese.
SC This sequence represents a mutated version of the full length
  osteoclastogenesis inhibitory factor (OCIF) of the invention. This
  sequence represents OCIF-CL in which amino acids 379-380 of the
  mature OCIF protein are deleted. The OCIF of the invention
  has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
  and 120 kD under non-reducing conditions. The protein is adsorbed onto
  cation-exchangers or heparin and its activity is lowered after 10 mins
  at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
  deg.C. OCIF is useful in the control of bone resorption and therefore
  in the treatment and prevention of disorders of bone resorption, e.g.
  osteoporosis.
SQ Sequence 399 AA;

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Query Match 99.1%; Score 3003; DB 20; Length 399;
Best Local Similarity 99.7%; Pred. No. 3.46e-293;
Matches 398; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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QY 1 MNKLCCALVFLDISIKWTTQETFPFKLYHDEFTSHQLCDKCPGTYLKQCHTAKWKT 60
Db 61 vcacpdpdhyttdswhtsdeclcydspvckelqyvqgecnrthrvceckegryleiefclx 120
QY 61 VCACPDPHYYTDSWHTSDECLCYSPVCKELQYVQECNRTHRVCECKEGRYLEIEFCLX 120
Db 121 hrscppgfyvvgagtpcrntvckrcpdpdggfssnetskapcrkhtncsvfgllltqkgnat 180
QY 121 HRSCPFGVVGAGTPCRNTVCKRCRCPDGGFSSNETSKAPCRKHTNCVFGLLLTQKGNAT 180
Db 181 hdnicsgnsesetqkcgldvdlceaeffrfavpkfcpnwlsvldnlpjgkvaesver1 240
QY 181 HDNICSGNSESSTQKCGLDVDLCEAEFFRFAPVKFCTPNWLSVLDNLPJGKVAESVER1 240
Db 241 krqhsqegqfqlklkwhknkqddivkklldlceensvgrhlgnaulftqglrsime 300
QY 241 KROHSSQEGQFQLKLKWHKNKQDDIVKKLIQDIDLCENSVGRHIGHANLTFEQLRSIME 300
Db 301 slpgkkygaediektlckacpsdqllkllslwrkngdgtllglnhalhsktyhfpkt 360
QY 301 SLPGKKYGAEDIEKTIACKPSDQILKLLSLWRKNGDGTLLGLNHALHKSXTYHFPKT 360
Db 361 vtqslkktirflhsfmyklyqklflemignqgsvkisc1 401
QY 361 VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQGVSKISCL 401

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RESULT 6
ID R99934 standard; Protein; 401 AA.
AC R99934;
DT 22-APR-1997 (first entry)
DE Mutated OCIF, OCIF-C22S.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS Osteoporosis.
FS Synthetic.
FH Key Location/Qualifiers
FT peptide 1..21
FT /note= "Signal peptide"
FT protein 22..401
FT /note= "Mature OCIF-C22S"
FT misc-difference 277
FT /label= C22S
PN MO9626217-A1.
PD 29-AUG-1996.
PF 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW ) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI WPI: 96-402320/40.
DR N-PSDB; T33164.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 38; Page 100-102; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
CC sequence represents OCIF-C22S in which the 22nd Cys residue in the
CC mature OCIF protein is substituted by Ser. The OCIF of the invention
CC has a molecular weight by SDS-PAGE of 60 kd under reducing conditions
CC and 120 kd under non-reducing conditions. The protein is adsorbed onto
CC cation-exchangers or heparin and its activity is lowered after 10 mins
CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
CC deg.C. OCIF is useful in the control of bone resorption and therefore
CC in the treatment and prevention of disorders of bone resorption, e.g.
CC osteoporosis.
SQ Sequence 401 AA:

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Query Match 99.1%; Score 3004; DB 20; Length 401;
 Best Local Similarity 99.3%; Pred. No. 2,73e-293;
 Matches 398; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

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Db 1 mnllccalvfldisikwtteqtfpkylyhdeetsbqllcdkcpqtylkqchctakwt 60
QY 1 MNKLCCALVFLDISIKWTTQETFPFKLYHDEFTSHQLCDKCPGTYLKQCHTAKWKT 60
Db 61 vcacpdpdhyttdswhtsdeclcydspvckelqyvqgecnrthrvceckegryleiefclx 120
QY 61 VCACPDPHYYTDSWHTSDECLCYSPVCKELQYVQECNRTHRVCECKEGRYLEIEFCLX 120
Db 121 hrscppgfyvvgagtpcrntvckrcpdpdggfssnetskapcrkhtncsvfgllltqkgnat 180
QY 121 HRSCPFGVVGAGTPCRNTVCKRCRCPDGGFSSNETSKAPCRKHTNCVFGLLLTQKGNAT 180
Db 181 hdnicsgnsesetqkcgldvdlceaeffrfavpkfcpnwlsvldnlpjgkvaesver1 240
QY 181 HDNICSGNSESSTQKCGLDVDLCEAEFFRFAPVKFCTPNWLSVLDNLPJGKVAESVER1 240
Db 241 krqhsqegqfqlklkwhknkqddivkklldlceensvgrhlgnaulftqglrsime 300
QY 241 KROHSSQEGQFQLKLKWHKNKQDDIVKKLIQDIDLCENSVGRHIGHANLTFEQLRSIME 300
Db 301 slpgkkygaediektlckacpsdqllkllslwrkngdgtllglnhalhsktyhfpkt 360
QY 301 SLPGKKYGAEDIEKTIACKPSDQILKLLSLWRKNGDGTLLGLNHALHKSXTYHFPKT 360
Db 361 vtqslkktirflhsfmyklyqklflemignqgsvkisc1 401
QY 361 VTQSLKKTIRFLHSFTMYKLYQKLFLEMIGNQGVSKISCL 401

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RESULT 7
ID R99935 standard; Protein; 401 AA.
AC R99935;
DT 22-APR-1997 (first entry)
DE Mutated OCIF, OCIF-C23S.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS Osteoporosis.
FS Synthetic.
FH Key Location/Qualifiers
FT peptide 1..21
FT /note= "Signal peptide"
FT protein 22..401
FT /note= "Mature OCIF-C23S"
FT misc-difference 400
FT /label= C23S
PN MO9626217-A1.
PD 29-AUG-1996.
PF 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW ) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
PI WPI: 96-402320/40.
DR N-PSDB; T33165.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 41; Page 103-105; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
CC sequence represents OCIF-C23S in which the 23rd Cys residue in the
CC mature OCIF protein is substituted by Ser. The OCIF of the invention
CC has a molecular weight by SDS-PAGE of 60 kd under reducing conditions
CC and 120 kd under non-reducing conditions. The protein is adsorbed onto
CC cation-exchangers or heparin and its activity is lowered after 10 mins
CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
CC deg.C. OCIF is useful in the control of bone resorption and therefore
CC in the treatment and prevention of disorders of bone resorption, e.g.
CC osteoporosis.
SQ Sequence 401 AA:

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Query Match 98.9%; Score 2996; DB 20; Length 401;
 Best Local Similarity 99.3%; Pred. No. 1.84e-292;
 Matches 398; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

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Db      1 mnnllccalvfldisikwtgetfppkylhydeetsbqlldckcpptylkqhcetakwt 60
      ||:|||||
QY      1 MNKLCCALVFELDISIKWTGETFPPKYLHYDEETSHQLLDCKCPPTYLKQHCETAKWT 60
Db      61 vcapcpdhytldswhtsdclscpyckelgyvkgecntrhvrceckegryleiefcl 120
      ||:|||||
QY      61 VCAPCPDHYTLD SWHTSDCLSCPYCKELGYVKGE CNTRHVRCECKEGRYLEIEFCL 120
Db      121 hscppgfvvgaqgperntvckrcpddgffsnetskapcrkhtncsvfgllltqgnat 180
      ||:|||||
QY      121 HSCPPGFGVGAQGP ERNTVCKRCPDGGFFSNETS KAPCRKHTNC SVFGLLLTQGNAT 180
Db      181 hdnicsgnsesqkcgldvtlceeafrfavptkfpnvlsvlvdnlpqtkvnaesveri 240
      ||:|||||
QY      181 HDNICSGNSESQKCGIDVTLCEEAFFRAVPTKFPNVL SVLV DNLPGTKVNAESVERI 240
Db      241 krqhsqegtfqlklwkhqndqdvkkliqddlcensvgrhlganltfeqlrsme 300
      ||:|||||
QY      241 KRQHSQEGTFQLKLWKHQNDQDVKKLIQDDLCENS VGRH LGANLTFEQLRSME 300
Db      301 slpgkkyvgaediektlckapsdqllklslwrlnkgdgtlkglmahkshktyhfpkt 360
      ||:|||||
QY      301 SLPGKKVGAEDIEKTIKACKPSDQILKL SLWRKNGDGT LKGLMAHKSHKTYHFPKT 360
Db      361 vtqslkktirflhsftmryklygklflemignvqsvkissl 401
      ||:|||||
QY      361 VTQSLKKTIRFLHSFTMYKLYOKLFLEMIGNOVSKISL 401

RESULT 8
ID      R99948 standard; Protein: 393 AA.
AC      R99948;
DE      23-APR-1997 (first entry)
KW      Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
      osteoporosis.
OS      Synthetic.
FH      Key
FT      Peptide 1.21
      /note= "Signal peptide"
FT      Protein 22.393
      /note= "Mature OCIF-CBst"
FT      MISC_difference 392
      /label= Gln371Ileu
      W09626217-A1.
      29-AUG-1996.
      20-FEB-1996; J00374.
      20-FEB-1995; JP-054977.
      21-JUL-1995; JP-207508.
      PA (SNOW) SNOW BRAND MILK PROD CO LTD.
      PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
      PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
      PI WPI: 96-402320/40.
      DR N-PSDB: T33178.
      PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
      for bone resorption control, esp. treatment of osteoporosis
      PS Claim 80; Page 126-128; 183pp; Japanese.
      CC This sequence represents a mutated version of the full length
      osteoclastogenesis inhibitory factor (OCIF) of the invention. This
      sequence represents OCIF-CBst in which Gln 371 is substituted by
      CC Leu and amino acids 373-380 of the mature OCIF protein are deleted.
      CC The DNA encoding this protein. The OCIF of the invention has a
      CC molecular weight by SDS-PAGE of 60 kD under reducing conditions
      CC and 120 kD under non-reducing conditions. The protein is adsorbed onto
      CC cation-exchangers or heparin and its activity is lowered after 10 mins
      CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
      CC deg.C. OCIF is useful in the control of bone resorption and therefore
      CC in the treatment and prevention of disorders of bone resorption, e.g.
      CC osteoporosis.
      SQ Sequence 393 AA.

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Query Match      97.6%; Score 2957; DB 20; Length 393;
Best Local Similarity 99.5%; Pred. No. 2,036-288;
Matches 391; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db      1 mnnllccalvfldisikwtgetfppkylhydeetsbqlldckcpptylkqhcetakwt 60
      ||:|||||
QY      1 MNKLCCALVFELDISIKWTGETFPPKYLHYDEETSHQLLDCKCPPTYLKQHCETAKWT 60
Db      61 vcapcpdhytldswhtsdclscpyckelgyvkgecntrhvrceckegryleiefcl 120
      ||:|||||
QY      61 VCAPCPDHYTLD SWHTSDCLSCPYCKELGYVKGE CNTRHVRCECKEGRYLEIEFCL 120
Db      121 hscppgfvvgaqgperntvckrcpddgffsnetskapcrkhtncsvfgllltqgnat 180
      ||:|||||
QY      121 HSCPPGFGVGAQGP ERNTVCKRCPDGGFFSNETS KAPCRKHTNC SVFGLLLTQGNAT 180
Db      181 hdnicsgnsesqkcgldvtlceeafrfavptkfpnvlsvlvdnlpqtkvnaesveri 240
      ||:|||||
QY      181 HDNICSGNSESQKCGIDVTLCEEAFFRAVPTKFPNVL SVLV DNLPGTKVNAESVERI 240
Db      241 krqhsqegtfqlklwkhqndqdvkkliqddlcensvgrhlganltfeqlrsme 300
      ||:|||||
QY      241 KRQHSQEGTFQLKLWKHQNDQDVKKLIQDDLCENS VGRH LGANLTFEQLRSME 300
Db      301 slpgkkyvgaediektlckapsdqllklslwrlnkgdgtlkglmahkshktyhfpkt 360
      ||:|||||
QY      301 SLPGKKVGAEDIEKTIKACKPSDQILKL SLWRKNGDGT LKGLMAHKSHKTYHFPKT 360
Db      361 vtqslkktirflhsftmryklygklflemignlv 393
      ||:|||||
QY      361 VTQSLKKTIRFLHSFTMYKLYOKLFLEMIGNOV 393

RESULT 9
ID      R99924 standard; Protein: 380 AA.
AC      R99924;
DE      22-APR-1997 (first entry)
KW      Mature osteoclastogenesis inhibitory factor.
      Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
      osteoporosis.
OS      Homo sapiens.
FH      Homo sapiens.
FT      Peptide 29-AUG-1996.
      W09626217-A1.
      29-AUG-1996.
      20-FEB-1996; J00374.
      20-FEB-1995; JP-054977.
      21-JUL-1995; JP-207508.
      PA (SNOW) SNOW BRAND MILK PROD CO LTD.
      PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
      PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
      PI WPI: 96-402320/40.
      DR N-PSDB: T36685.
      PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
      for bone resorption control, esp. treatment of osteoporosis
      PS Claim 6; Page 62-64; 183pp; Japanese.
      CC This sequence represents the mature osteoclastogenesis inhibitory
      factor (OCIF) of the invention. The OCIF has a molecular weight by
      CC SDS-PAGE of 60 kD under reducing conditions and 120 kD under non-
      CC reducing conditions. The protein is adsorbed onto cation-exchangers
      CC or heparin and its activity is lowered after 10 mins at 70 deg.C or
      CC 30 mins at 56 deg.C, and is lost after 10 mins at 90 deg.C. OCIF is
      CC useful in the control of bone resorption and therefore in the
      CC treatment and prevention of disorders of bone resorption, e.g.
      CC osteoporosis.
      SQ Sequence 380 AA;

Query Match      94.4%; Score 2861; DB 20; Length 380;
Best Local Similarity 100.0%; Pred. No. 1,796-278;
Matches 380; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db      1 etfppkylhydeetsbqlldckcpptylkqhcetakwtvcapcpdhytldswhtsdecl 60
      ||:|||||
QY      22 ETFPKYLHYDEETSHQLLDCKCPPTYLKQHCETAKWTVCA PCPDHYTLD SWHTSDECL 61

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Db	61	ycvncvckelygvkbecnrtihrvveckegrylelefcilknrcoppfygvyaqatpenny	120
Qy	82	ycspvckceloqvwkoecnthnrvveckegrylelefcilknrcoppfygvyaqatpenny	141
Db	121	ckrcpvdgffsnetskapcrkthtcsyfgillltqkgnathnrlcosgmesetqkcgldvtcl	180
Qy	142	ckrcpvdgffsnetskapcrkthtcsyfgillltqkgnathnrlcosgmesetqkcgldvtcl	201
Db	181	ceeaiffcfaaybtkftpmwlsylvdnlpjgkynaesverikrqhsqgeqtfqilklwkhq	240
Qy	202	ceeaiffcfaaybtkftpmwlsylvdnlpjgkynaesverikrqhsqgeqtfqilklwkhq	261
Db	241	kdgatvkkilddilceusvgrhigbnlcteqrlsimeslpjgkrygaedtektiaacp	300
Qy	262	kddoiwkkilddilceusvgrhigbnlcteqrlsimeslpjgkrygaedtektiaacp	321
Db	301	sdqilklslwrciknggdclkgjlmhlnhsktyhfkvtvqslkktirflhsftmykly	360
Qy	322	sdqilklslwrciknggdclkgjlmhlnhsktyhfkvtvqslkktirflhsftmykly	381
Db	361	qkflnemjngvsvkiscsl	380
Qy	382	qkflnemjngvsvkiscsl	401

	RESULT	10	
ID	R99943 standard; Protein; 351 AA.		
AC	R99943;		
DT	23-APR-1997 (first entry)		
DE	Mutated OCIF, OCIF-CC.		
KW	Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;		
KM	osteoporosis.		
OS	Synthetic.		
FT	Key	Location/Qualifiers	
FT	Peptide	1..21	
FT	/note-"Signal peptide"		
FT	Protein	22..351	
FT	/note-"Mature OCIF-CC"		
PN	MO6926217-A1.		
PD	29-AUG-1996.		
PF	20-FEB-1996; J00374.		
PR	20-FEB-1995; JP-054977.		
PR	21-JUL-1995; JP-207508.		
PA	(SNOW.) SNOW BRAND MILK PROD CO LTD.		
PI	Goto M, Hiasaho K, Kobayashi F, Mochizuki S, Morinaga T;		
PI	Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;		
PI	WPI, 56-402320/40.		
DD	DNA encoding osteoclastogenesis inhibitory factor protein - useful		
DS	for bone resorption control, esp. treatment of osteoporosis		
PS	Claim 65: Page 119-121; 183pp: Japanese.		
CC	This sequence represents a mutated version of the full length		
CC	osteoclastogenesis inhibitory factor (OCIF) of the invention. This		
CC	sequence represents OCIF-CC in which amino acids 331-380 of the		
CC	mature OCIF protein are deleted. The OCIF of the invention		
CC	has a molecular weight by SDS-PAGE of 60 kD under reducing conditions		
CC	and 120 kD under non-reducing conditions. The protein is adsorbed on		
CC	cation-exchangers or heparin and its activity is lowered after 10 min		
CC	at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90		
CC	deg.C. OCIF is useful in the control of bone resorption and therefore		
CC	in the treatment and prevention of disorders of bone resorption, e.g,		
CC	osteoporosis.		
SO	Sequence 351 AA:		
	Query Match 87.3%, Score 2644, DB 20, Length 351;		
	Best Local Similarity 99.7%; Pred. No. 5,25e-256;		
	Matches 350; Conservative 1; Mismatches 0; Indels 0; Gaps		
Dn	1 mnnllcalayldisistvtgqetfppkylhydeestnqlldckopptylkhctskvtt 60		
Oy	1 nnklLcAlALVFLDIStKWTDtETFPpYtLRHDEtSHQLCDCKPpEtYtKQdCtANWkt 60		
Dn	61 vcadpdlhytyshtstdeclycsypvkclqyvkgencnrtnrvceekerytlefcik 120		

QY	61	VCAPCPDHYITRDSMHTSDECIKXCSPVCKELOYQEDNRHNRKCECKBGRXYLEIEFCIK	120
Db	121	hnsccpgrfgyvvgagtpentvctkrcpogdfmsenssapcrkthnsvfgjllltqknat	180
QY	121	HRSCPPGSGVYVAGCPENNTVCKKRCPOGFSENSERSAPCRKRNHNSVFGJLLTQKGNAT	180
Db	181	hndnlsgrsaeetqkcgidvltlceaeaffrfaypltkfipunjwsvldnlpjgkvmnaesveri	240
QY	181	HDNLSGSESTQKCGIDVLTLCESAFFRFAYPLTFPTNNMLSVLDNLPJGRKVMNAESVERI	240
Db	241	krghsgeqgtfqljlkjwhqpkxgdqfkkllqgdleensvqrnhiqnahttfegjzrime	300
QY	241	KRGHSQGQGTQLLKKMKMHQKDDIYKKIIOIDIDLCENSVQRHIGNANTFEGJZRLIME	300
Db	301	slpgkthvgaedtektikachpsgdqllkllsvtkngdqdtlkglmalnh	351
QY	301	SLPGKTHVGAEDTEKTIKACHPSDQILKLKLSVTRKNDODOTLKGMLALNH	351

ID	RESULT	11
AC	R99936: standard; Protein; 360 AA.	
DE	23-APR-1997 (first entry)	
DT	Mutated OCIF, OCIF-DCR1.	
KW	Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;	
KW	osteoporosis.	
OS	Synthetic.	
PR	Key	Location/Qualifiers
FT	Peptide	1..21
FT	/note- "Signal peptide"	
FT	Protein	22..360
FT	/note- "Mature OCIF-DCR1"	
FT	Misc.diffrence	22..23
FT	/note- "Position of deletion, delta 2-42"	
PN	W09626217-AL.	
PD	29-AUG-1996.	
PF	20-FEB-1996; J00374.	
PR	20-FEB-1995; JP-054977.	
PR	21-JUL-1995; JP-207508	
PA	(SNOW) SNOW BRAND MILK PROD CO LTD.	
PI	Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;	
PI	Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;	
DR	WPI; 96-402320/40.	
DR	N-PSDB; T33166.	
PT	DNA encoding osteoclastogenesis inhibitory factor protein - useful	
PT	for bone resorption control, esp. treatment of osteoporosis	
PS	Claim 44; Page 105-107; 183pp; Japanese.	
CC	This sequence represents a mutated version of the full length	
CC	osteoclastogenesis inhibitory factor (OCIF) of the invention. This	
CC	sequence represents OCIF-DCR1 in which amino acids 2-42 of the	
CC	mature OCIF protein are deleted. The OCIF of the invention	
CC	has a molecular weight by SDS-PAGE of 60 kD under reducing conditions	
CC	and 120 kD under non-reducing conditions. The protein is adsorbed onto	
CC	cation-exchangers or heparin and its activity is lowered after 10 mins	
CC	at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90	
CC	deg.C. OCIF is useful in the control of bone resorption and therefore	
CC	in the treatment and prevention of disorders of bone resorption, e.g.	
CC	osteoporosis.	
CC	Sequence 360 AA;	
Query Match	83.8%; Score 2539; DB 20; Length 360;	
Best Local Similarity	98.3%; Pred. No. 3,84e-245;	
Matches 341; Conservative 1; Mismatches 4; Indels 1; Gaps 1;		
Db	15 slkwttq-epcpdhytswtsdeclycspvckelgyvqxqcrtnhryceckegryle 73	
Oy	55 TAKMTCVAPCPDHYTDSWHTSDCLYCSVPVCKELGYVQXCRNTHRYCECKEGRYLE 114	
Db	74 lcfclhnsccpfgfvvgaqtpemntvckrppdgffsnetskskpcrkhnscvfglllt 133	
Oy	115 IEFCLKHAHSCPEGFGVQAGPERNVTCRKRPDPDFSNETSSSKAPCRKHNCVSYFGLLLT 174	

Db 134 qknathdnicsgnsesctgcgldvtlceaeaffrayptkffpnwlsylvdnlpgtkwna 193
|||||
QY 175 QKGNATHDNICSGNSESTCKCGIDVTLCEAEAFRAVPKFTFPMNLISLVNDLPGTGVNA 234
Db 194 esverlkrqhsqgctfqlklkwkhnkqgdvkkliqddidlcensvqrhghnalfefq 233
|||||
QY 235 ESVERIKRQHSQEQFTQLKLMKHNKQKDDIVKKIIDDIDLCENSVQRHGHANLTFEEQ 294
Db 254 lrsimeslpqkkygaediektkackpsddqllklslwrlkngdgtlkglmhalkhskt 313
|||||
QY 295 LRSIMESLPQKKYGAEDIEKTKACKPSDDQLKLSTLRKYNKGDGTLLKGLMHALKHSKT 354
Db 314 yhipkvtqslkktriflshftmkyqklflmniqnvsvxisc1 360
|||||
QY 355 YHIPKVTQSLKKTIRFLSHFTMYKYLQKLFLEMIGNVSVXISCL 401

RESULT 12
R99949 standard; Protein: 321 AA.
R99949;
23-APR-1997 (first entry)
DE Mutated OCIF, OCIF-CSpH.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS Synthetic.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..321
FT /note= "Mature OCIF-CSpH"
PN MO9626217-A1.
PF 29-AUG-1996.
PR 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR MPI: 96-402320/40.
DR N-PSDB; T33179.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 83; Page 128-129; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
CC sequence represents OCIF-CSpH in which amino acids 298-380 of the mature
CC OCIF protein are replaced by Ser-Leu-Asp. These changes are caused by
CC the introduction of a restriction site in the DNA encoding this protein.
CC The OCIF of the invention has a molecular weight by SDS-PAGE of 60 kD
CC under reducing conditions and 120 kD under non-reducing conditions. The
CC protein is adsorbed onto cation-exchangers or heparin and its activity is
CC lowered after 10 mins at 70 deg.C or 30 mins at 56 deg.C, and is lost
CC after 10 mins at 90 deg.C. OCIF is useful in the control of bone
CC resorption and therefore in the treatment and prevention of disorders
CC of bone resorption, e.g. osteoporosis.
SQ Sequence 321 AA:

Query Match 79.0%; Score 2394; DB 20; Length 321;
Best Local Similarity 99.7%; Pred. No. 3,78e-230;
Matches 317; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1 mnnllccalvflslskwtgetfppkylyhydeetshqllcdkcpptgylkghctakwt 60
|||||
QY 1 MNKLCCALVFLDISIKWTQETFPFKYLYHYDEETSHQLCDKCPPTGYLKGHCTAKWT 60
Db 61 vcappdhytydswhtsdeciycspvckelgyvkqecnrthrvccckegryleiefcl 120
|||||
QY 61 VCAPPDHYTYDSWHTSDECIYCSPVCKELQYVKQECNRTHRVCCCKEGRYLEIEFCLK 120
Db 121 hrcscppfgvvaqgtpernvtvcrcpddgffsnetskapcrkhtnscvfgllltqkgnat 180
|||||
QY 121 HRCSCPFGVVAQGTPEARNVTVCRCPPDDGFFSNETSKAPCRKHTNCSVFGLLLTQKGNAT 180

Db 181 hdnicsgnsesctgcgldvtlceaeaffrayptkffpnwlsylvdnlpgtkwna 240
|||||
QY 181 HDNICSGNSESTCKCGIDVTLCEAEAFRAVPKFTFPMNLISLVNDLPGTKVNAESVERI 240
Db 241 krqhsqgctfqlklkwkhnkqgdvkkliqddidlcensvqrhghnalfefqslne 300
|||||
QY 241 KRQHSQEQFTQLKLMKHNKQKDDIVKKIIDDIDLCENSVQRHGHANLTFEQLSLNE 300
Db 301 slpgkkygaediektlka 318
|||||
QY 301 SLPGKKYGAEDIEKTKA 318

RESULT 13
R99938 standard; Protein: 360 AA.
R99938;
23-APR-1997 (first entry)
DE Mutated OCIF, OCIF-DCR3.
KW Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;
OS Synthetic.
FH Key Location/Qualifiers
FT Peptide 1..21
FT /note= "Signal peptide"
FT Protein 22..360
FT /note= "Mature OCIF-DCR3"
FT MISC-difference 105..106
FT /note= "Position of deletion, delta 85-122"
PN MO9626217-A1.
PF 29-AUG-1996.
PR 20-FEB-1996; J00374.
PR 20-FEB-1995; JP-054977.
PR 21-JUL-1995; JP-207508.
PA (SNOW) SNOW BRAND MILK PROD CO LTD.
PI Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;
PI Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;
DR MPI: 96-402320/40.
DR N-PSDB; T33168.
PT DNA encoding osteoclastogenesis inhibitory factor protein - useful
PT for bone resorption control, esp. treatment of osteoporosis
PS Claim 50; Page 109-111; 183pp; Japanese.
CC This sequence represents a mutated version of the full length
CC osteoclastogenesis inhibitory factor (OCIF) of the invention. This
CC sequence represents OCIF-DCR3 in which amino acids 85-122 of the
CC mature OCIF protein are deleted. The OCIF of the invention
CC has a molecular weight by SDS-PAGE of 60 kD under reducing conditions
CC and 120 kD under non-reducing conditions. The protein is adsorbed onto
CC cation-exchangers or heparin and its activity is lowered after 10 mins
CC at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90
CC deg.C. OCIF is useful in the control of bone resorption and therefore
CC in the treatment and prevention of disorders of bone resorption, e.g.
CC osteoporosis.
SQ Sequence 360 AA:

Query Match 75.3%; Score 2282; DB 20; Length 360;
Best Local Similarity 90.2%; Pred. No. 1.42e-218;
Matches 359; Conservative 1; Mismatches 0; Indels 38; Gaps 1;

Db 1 mnnllccalvflslskwtgetfppkylyhydeetshqllcdkcpptgylkghctakwt 60
|||||
QY 1 MNKLCCALVFLDISIKWTQETFPFKYLYHYDEETSHQLCDKCPPTGYLKGHCTAKWT 60
Db 61 vcappdhytydswhtsdeciycspvckelgyvkqecnrthrvccckegryleiefcl 105
|||||
QY 61 VCAPPDHYTYDSWHTSDECIYCSPVCKELQYVKQECNRTHRVCCCKEGRYLEIEFCLK 120
Db 106 -----rcpddgffsnetskapcrkhtnscvfgllltqkgnat 142
|||||
QY 121 HRCSCPFGVVAQGTPEARNVTVCRCPPDDGFFSNETSKAPCRKHTNCSVFGLLLTQKGNAT 180
Db 143 hdnicsgnsesctgcgldvtlceaeaffrayptkffpnwlsylvdnlpgtkwna 202
|||||
QY 143 HDNICSGNSESTCKCGIDVTLCEAEAFRAVPKFTFPMNLISLVNDLPGTKVNAESVERI 240

Db 203 krgnssggcqtqllklkvhqknqgdvkkikqiddlcevsqzghpnahttfegqlsme 262
QY 241 KROHSSQEQFTQLKRLMKHQNKKDDVIKKIIOIDIDLCENSVRIGHANTFEQSLME 300
Db 263 slpgkkvgaediektikackpsdglkllslwrknqdgdtlkglmahkshktyhfrpt 322
QY 301 SLPGKRGVAEDIEKTIKACKPSDDILKLLSLMRKNDODTLKGLMHALKSHKTYHFRPT 360
Db 323 vtgsllkctirflhsftmyklyqkflflemignqvsyvk 360
QY 361 VTQSLKKTIRFLHSFTMYKLLQKFLFLEMIGNQVOSYVK 398

Accession	Source	Protein	Length	Weight	PI	Ref
AC	R98939	standard; Protein; 359 AA.	359	359	5.0	1
DT	23-APR-1997	(first entry)				2
DE	Mutated OCIF, OCIF-DCR4.					3
OS	Osteoclastogenesis Inhibitory factor; OCIF; heparin; bone resorption; osteoporosis.					4
SY	Synthetic.					5
FT	Key	Location/Qualifiers				6
FT	Peptide	1..21				7
FT	/note="Signal peptide"					8
FT	protein	22..359				9
FT	/note="Mature OCIF-DCR4"					10
FT	Misc.diffidence	143..144				11
FT	/note="Position of deletion, delta 123-164"					12
PN	W09626217-A1.					13
PD	29-AUG-1996.					14
PF	20-FEB-1996; J00374.					15
PR	20-FEB-1995; JP-054977.					16
PR	21-JUL-1995; JP-207508.					17
PL	(SNOW) SNOW BRAND MILK PROD CO LTD.					18
PI	Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T, Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H; WPI; 96-402320/40.					19
DR	N-PSDB; T33169.					20
PT	DNA encoding osteoclastogenesis inhibitory factor protein - useful for bone resorption control, esp. treatment of osteoporosis					21
PS	Claim 53; Page 111-113; 153pp; Japanese.					22
CC	This sequence represents a mutated version of the full length osteoclastogenesis inhibitory factor (OCIF) of the invention. This sequence represents OCIF-DCR4 in which amino acids 123-164 of the mature OCIF protein are deleted. The OCIF of the invention has a molecular weight by SDS-PAGE of 60 kD under reducing conditions and 120 kD under non-reducing conditions. The protein is adsorbed on cation-exchangers or heparin and its activity is lowered after 10 mins at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90 deg.C. OCIF is useful in the control of bone resorption and therefore in the treatment and prevention of disorders of bone resorption, e.g. osteoporosis.					23
CC	Sequence 359 AA;					24

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Query Match      74.0%      Score 2242;  Db 20;  Length 359;
Best Local Similarity 89.0%      Pred. No. 1,92e-214;
Matches 357;  Conservative 1;  Mismatches 1;  Indels 42;  Gaps

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Db 1 mnllccalvfidisikwtetfipxylyhdeetsqllcdkcpptylkghtakwt 60
QY 1 MNKLCCALVFLDISIKWTOTETPPKRLHDEETSHQLCDKCPPTYLKHCTAKWT 60
Db 61 vcapcpdhlyydwtsdswtsdeclycspvckeluyvqgcamrthmyrceekgryleiefcl 120
QY 61 VCAPCPDHLYYDWSHMTSDCLCYCSPVCKELUYVQGCNRTHMYRCEKBEGRYLEIEFCUK 120
Db 121 hrscppgfgvvgagtpenttck----- 143
QY 121 HRSCPPGGGVVQAGIPENTVTCCKCPDGFESFNETSSSAPCRKHTNCSVFGILLTQGMAT 180
Db 144 -----sgnsesltqcgldvltlceeaaffrfaypklftpnwlsavlvdnlpqtkvnaesverl 198

Qy	181	HDRLCSGSESTQKCGIDVLTCEAEFRFAVPKTFPNNMLSVLVDNPGKVAAESEERI	240
Db	199	krghsseqetqllkikvknqkdqdvk:liqdtldicensvgrighanultfeqslsme	258
Qy	241	KROHSSOEQRFOLKLKWKHOKDDIYKRTIIDIDLCENSVRGHGANTFEOLRSIME	300
Db	259	slpghkvgaediekttkasrpsqdil:llslw:ikngddgtlglmalhsktyfprk	318
Qy	301	SLPKRGVAEDIEKTIKACRSPDILKLSIMRIKNDODDTGLGMALHKSXTYHPKPT	360
Db	319	vtgslkktirflhsftmyklyqk:lflemignvqsvk:iscf	359
Qy	361	VTQSLKKTIRFLHSFTMYKLYQK:LFLEMIGNOVQSVK:ISCF	401

ID	RESULT	15
AC	R99937	standard; Protein; 359 AA.
DT	23-APR-1997	(first entry)
DE	Mutated OCIF, OCIF-DCR2.	
KW	Osteoclastogenesis inhibitory factor; OCIF; heparin; bone resorption;	
KW	osteoporosis.	
OS	Synthetic.	
FT	Key	Location/Qualifiers
FT	Peptide	1..21
FT	/note="Signal peptide"	
FT	/note="Signal peptide"	22..359
FT	protein	/note="Mature OCIF-DCR2"
FT	Misc_difference	63..64
FT	/note="Position of deletion, delta	43-84"
PN	WC9626217-A1.	
PD	29-AUG-1996.	
PF	20-FEB-1996.	J00374.
PR	20-FEB-1995;	JP-054977.
PR	21-JUL-1995;	JP-207508.
PA	(SNOW) SNOW BRAND MILK PROD CO LTD.	
PI	Goto M, Higashio K, Kobayashi F, Mochizuki S, Morinaga T;	
PI	Nakagawa N, Shima N, Tsuda E, Ueda M, Yano K, Yasuda H;	
DR	WPI: 96-40230/40.	
DR	N-PSDB: T33167.	
PT	DNA encoding osteoclastogenesis inhibitory factor protein - useful	
PT	for bone resorption control, esp. treatment of osteoporosis	
PS	Clim 47; Page 107-109; 183pp; Japanese.	
CC	This sequence represents a mutated version of the full length	
CC	osteoclastogenesis inhibitory factor (OCIF) of the invention. This	
CC	sequence represents OCIF-DCR2 in which amino acids 43-84 of the	
CC	mature OCIF protein are deleted. The OCIF of the invention	
CC	has a molecular weight by SDS-PAGE of 60 kD under reducing conditions	
CC	and 120 kD under non-reducing conditions. The protein is adsorbed on	
CC	cation-exchangers or heparin and its activity is lowered after 10 min	
CC	at 70 deg.C or 30 mins at 56 deg.C, and is lost after 10 mins at 90	
CC	deg.C. OCIF is useful in the control of bone resorption and therefore	
CC	in the treatment and prevention of disorders of bone resorption, e.g.	
CC	osteoporosis.	
CC	Sequence	359 AA;

	Query Match	73.2%	Score 2218;	DB 20;	Length 359;
	Best Local Similarity	89.4%;	Pred. No. 5.7	e-212;	
	Matches 312;	Conservative 5;	Mismatches 26;	Indels 6;	Gaps
Db	15	sikwtq-etfpkylyhde-etshg-llcdk-cppetylkqhtakwktvcaacekgry	70		
Qy	55	TAKMKTVCAPEPDHY-YTDSWHTSDEDELQSPVCKELGYKQECNRRHNHNYC-ECKEGRY	112		
Db	71	lelefcfkhscppgfygvagdpferntvckrcpddgffsnetsskacpdrhntcsvqll	130		
Qy	113	LEIEFCLNHRSCPGFQVQAGPERNTVCKRCDGFFSNETSSEKACRKHNTCSVQGLL	172		
Db	131	ltqgnathddicgsnsestcgcldtllceeafrfayvckfiprnslsvlnlpctkv	190		
Qy	173	LTKGNATHNDICGNSSTDKCIDVTLCEBAFFRAVPKFTPMNLASLVADNLPETKV	222		
Db	191	naesverlkrhssqeqefqllkvlwkhqnxddqdvkklldqldlceasvyrhlganltf	250		

QY	233	NAESVERIKROHSSOEOTFOLKLMKHONKDODIVKKIIOIDIDLCEHSYORHIGHANLTF	292
Db	251	eqIrsImeslpqkkygaediektackpsdqllkllslwrikngqdtLkgImhalkhs	310
QY	293	EQLRSLMESLPGKRYGAEDIEKTIKACKPSDQILKLSLWRIKNGDQDTLKGIMHALKHS	352
Db	311	KyhfPktvtqslkktirfhsftmyKlyhklflemiqvgvskisc1	359
QY	353	KTYHPKXIVTOSLKTIRFLHSFTMKLYOKLPLEMIGNOVOSKISCL	401

Search completed: Wed Aug 20 09:41:58 1997
 Job time : 60 secs.

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